

IN THE CLAIMS:

1. (Amended) A method for determining the presence of antibodies to HIV in a body fluid, comprising:

(a) contacting, under conditions which permit immunospecific binding to form a reaction mixture the body fluid with a composition containing at least one polypeptide or protein comprising the following amino acid sequences where oligopeptides having at least six amino acids which come within the sequence of at least one of the following polypeptide sequences will include epitopes within such sequence:

[(I) BRU124E (SEQ ID NO: 1)

W-X-Lys-Ile-Gln-Asn-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-
Ser-Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-
Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z]

[(II) BRU124EX (SEQ ID NO: 2)

W-X-Leu-Gln-Lys-Gln-Ile-Thr-Lys-Ile-Gln-Asn-Phe-
Arg-Val-Tyr-Tyr-Arg-Asp-Ser-Arg-Asp-Pro-Leu-Trp-
Lys-Gly-Pro-Ala-Lys-Leu-Leu-Trp-Lys-Gly-Glu-Gly-
Ala-Y-Z

[(III) BRU124F1X (SEQ ID NO: 3)

W-X-Lys-Ile-Gln-Asn-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-
Ser-Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-
Leu-Trp-Lys-Gly-Glu-Gly-Ala-Val-Val-Ile-Gln-Asp-
Asn-Ser-Asp-Ile-Lys-Y-Z

[(IV) BRU124F3X (SEQ ID NO: 4)

W-X-Lys-Ile-Gln-Asp-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-
Ser-Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-
Leu-Trp-Lys-Gly-Glu-Gly-Ala-Val-Val-Ile-Gln-Asp-
Asn-Y-Z

[(V) ROD 124E1 (SEQ ID NO: 5)

W-X-Lys-Leu-Lys-Asp-Phe-Arg-Val-Tyr-Phe-
Arg-Glu-Gly-Arg-Asp-Gln-Leu-Trp-Lys-Gly-
Pro-Gly-Glu-Leu-Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z

(VI) ROD 124EX (SEQ ID NO: 6)

W-X-Leu-Gln-Ala-Lys-Asn-Ser-Lys-Leu-Lys-
Asp-Phe-Arg-Val-Tyr-Phe-Arg-Glu-Gly-Arg-
Asp-Gln-Leu-Trp-Lys-Gly-Pro-Gly-Glu-Leu-
Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z

(VII) ROD 124C2X (SEQ ID NO: 7)

W-X-Lys-Leu-Lys-Asp-Phe-Arg-
Val-Tyr-Phe-Arg-Glu-Gly-Arg-Asp-Gln-Leu-
Trp-Lys-Gly-Pro-Gly-Glu-Leu-Leu-Trp-Lys-
Gly-Glu-Gly-Ala-Val-Leu-Val-Lys-Val-Gly-
Thr-Asp-Ile-Lys-Y-Z

(VIII) ROD 124C1X (SEQ ID NO: 8)

W-X-Tyr-Phe-Arg-Glu-Gly-Arg-Asp-Gln-Leu-
Trp-Lys-Gly-Pro-Gly-Glu-Leu-Leu-Trp-Lys-
Gly-Glu-Gly-Ala-Val-Leu-Val-Lys-Val-Gly-
Thr-Asp-Ile-Lys-Y-Z

(IX) ROD 123C3X (SEQ ID NO: 9)

X-Lys-Leu-Lys-Asp-Phe-Arg-Val-Tyr-Phe-
Arg-Glu-Gly-Arg-Asp-Gln-Leu-Trp-Lys-Gly-
Pro-Gly-Glu-Leu-Leu-Trp-Lys-Gly-Glu-Gly-
Ala-Val-Leu-Val-Lys-Val-Gly-Thr-Asp-Ile-Lys-Y-Z

(X) POL2A1 (SEQ ID NO: 10)

W-X-Lys-Gly-Pro-Gly-Glu-Leu-Leu-Trp-Lys-
Gly-Glu-Gly-Ala-Val-Leu-Val-Lys-Val-Gly-
Thr-Asp-Ile-Lys-Ile-Ile-Pro-Arg-Arg-Lys-

Ala-Lys-Ile-Ile-Y-Z

(XI) ROD124C5X (SEQ ID NO: 11)

W-X-Lys-Leu-Lys-Asp-Phe-Arg-Val-Tyr-Phe-
Arg-Glu-Gly-Arg-Asp-Gln-Leu-Trp-Lys-Gly-
Pro-Gly-Glu-Leu-Leu-Trp-Lys-Gly-Glu-Gly-
Ala-Val-Leu-Val-Lys-Val-Gly-Y-Z

wherein W is either a H of the amino terminal NH₂ group of the polypeptide or an additional amino acid bonded to the amino terminal NH₂ group of the polypeptide, the additional amino acid being selected to facilitate coupling of the polypeptide to a carrier protein or to a support; X is absent or Cys-Gly-Gly; Y is absent or Cys; and Z is OH or NH₂. wherein W is either a H of the amino terminal NH₂ group of the polypeptide or an additional amino acid bonded to the amino terminal NH₂ group of the polypeptide, the additional amino acid being selected to facilitate coupling of the polypeptide to a carrier protein or to a support; X is absent or Cys-Gly-Gly; Y is absent or Cys; and Z is OH or NH₂;

(b) detecting whether immunospecific binding has occurred between the polypeptide and an antibody component of the body fluid in which an immune complex is formed and in which the detection of the immune complex indicates the presence of antibodies to HIV in the body fluid.

12. (Amended) A method for determining the presence of antibodies to HIV-1 in a body fluid, comprising:

(a) contacting under conditions which permit immunospecific binding to form a reaction mixture the body fluid with a composition containing at least one polypeptide or protein comprising the following amino acid sequences where oligopeptides having at least six amino acids which come within the sequence of the following polypeptide sequence will include epitopes within such sequence:

9 [(I) BRU124E (SEQ ID NO: 1)

10
11 W-X-Lys-Ile-Gln-Asn-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-Ser-
12 Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-Leu-Trp-
13 Lys-Gly-Glu-Gly-Ala-Y-Z]
14

15 (II) BRU124EX (SEQ ID NO: 2)

16 W-X-Leu-Gln-Lys-Gln-Ile-Thr-Lys-Ile-Gln-Asn-Phe-Arg-
17 Val-Tyr-Tyr-Arg-Asp-Ser-Arg-Asp-Pro-Leu-Trp-Lys-Gly-
18 Pro-Ala-Lys-Leu-Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z
19

20 (III) BRU124FX1 (SEQ ID NO: 3)

21 W-X-Lys-Ile-Gln-Asn-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-Ser-
22 Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-Leu-Trp-
23 Lys-Gly-Glu-Gly-Ala-Val-Val-Ile-Gln-Asp-Asn-Ser-Asp-
24 Ile-Lys-Y-Z
25

26 (IV) BRU124F3X (SEQ ID NO: 4)

27 W-X-Lys-Ile-Gln-Asp-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-Ser-
28 Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-Leu-Trp-
29 Lys-Gly-Glu-Gly-Ala-Val-Val-Ile-Gln-Asp-Asn-Y-Z
30

31 wherein W is either a H of the amino terminal NH₂ group of the polypeptide or
32 an additional amino acid bonded to the amino terminal NH₂ group of the polypeptide, the
33 additional amino acid being selected to facilitate coupling of the polypeptide to a carrier
34 protein or to a support; X is absent or Cys-Gly-Gly; Y is absent or Cys; and Z is OH or NH₂;

35 (b) determining whether immunospecific binding has occurred between the
36 polypeptide and an antibody component of the body fluid in which the detection of
37 immunospecific binding indicates the presence of antibodies to HIV in the body fluid.

1 14. (Amended) A polypeptide composition, immunoreactive to antibodies to
2 HIV, comprising at least one of the following amino acid sequences:

3 [(I) BRU124E

W-X-Lys-Ile-Gln-Asn-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-Ser-
Arg-Asp-Pro-Leu-Trp-Lys-Gly-ProAla-Lys-Leu-Leu-Trp-
Lys-Gly-Glu-Gly-Ala-Y-Z]

(II) BRU124EX

W-X-Leu-Gln-Lys-Gln-Ile-Thr-Lys-Ile-GlnAsn-Phe-Arg-
Val-Tyr-Tyr-Arg-Asp-Ser-Arg-AspPro-Leu-Trp-Lys-Gly-
Pro-Ala-Lys-Leu-Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z

(III) BRU124F1X

W-X-Lys-Ile-Gln-Asn-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-Ser-
Arg-Asp-Pro-Leu-Trp-Lys-Gly-ProAla-Lys-Leu-Leu-Trp-
Lys-Gly-Glu-Gly-Ala-Val-Val-Ile-Gln-Asp-Asn-Ser-Asp-
Ile-Lys-Y-Z

(IV) BRU124F3X

W-X-Lys-Ile-Gln-Asp-Phe-Arg-Val-Tyr-Tyr-Arg-Asp-Ser-
Arg-Asp-Pro-Leu-Trp-Lys-Gly-Pro-Ala-Lys-Leu-Leu-Trp-
Lys-Gly-Glu-Gly-Ala-Val-Val-Ile-Gln-Asp-Asn-Y-Z

(V) ROD 124E1

W-X-Lys-Leu-Lys-Asp-Phe-Arg-Val-Tyr-Phe-
Arg-Glu-Gly-Arg-Asp-Gln-Leu-Trp-Lys-Gly-
Pro-Gly-Glu-Leu-Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z

(VI) ROD 124EX

W-X-Leu-Gln-Ala-Lys-Asn-Ser-Lys-Leu-Lys-
Asp-Phe-Arg-Val-Tyr-Phe-Arg-Glu-Gly-Arg-

Asp-Gln-Leu-Trp-Lys-Gly-Pro-Gly-Glu-Leu-
Leu-Trp-Lys-Gly-Glu-Gly-Ala-Y-Z

(VII) ROD 124C2X

W-X-Lys-Leu-Lys-Asp-Phe-Arg-
Val-Tyr-Phe-Arg-Glu-Gly-Arg-Asp-Gln-Leu-
Trp-Lys-Gly-Pro-Gly-Glu-Leu-Leu-Trp-Lys-
Gly-Glu-Gly-Ala-Val-Leu-Val-Lys-Val-Gly-
Thr-Asp-Ile-Lys-Y-Z

(VIII) ROD 124C1X

W-X-Tyr-Phe-Arg-Glu-Gly-Arg-Asp-Gln-Leu-
Trp-Lys-Gly-Pro-Gly-Glu-Leu-Leu-Trp-Lys-
Gly-Glu-Gly-Ala-Val-Leu-Val-Lys-Val-Gly-
Thr-Asp-Ile-Lys-Y-Z

(IX) ROD 123C3X

X-Lys-Leu-Lys-Asp-Phe-Arg-Val-Tyr-Phe-
Arg-Glu-Gly-Arg-Asp-Gln-Leu-Trp-Lys-Gly-
Pro-Gly-Glu-Leu-Leu-Trp-Lys-Gly-Glu-Gly-
Ala-Val-Leu-Val-Lys-Val-Gly-Thr-Asp-Ile-Lys-Y-Z

(X) POL2A1

W-X-Lys-Gly-Pro-Gly-Glu-Leu-Leu-Trp-Lys-
Gly-Glu-Gly-Ala-Val-Leu-Val-Lys-Val-Gly-
Thr-Asp-Ile-Lys-Ile-Ile-Pro-Arg-Arg-Lys-
Ala-Lys-Ile-Ile-Y-Z

(XI) ROD124C5X